

## ENVIRONMENTAL ASSESSMENT DOCUMENT

### A. Project Identification:

**Applicant:** Stanton County S.I.D. No. 1      **Project No.** C317985  
**Community:** S.I.D. No. 1, Stanton County      **County:** Stanton County      **State:** Nebraska  
**Total Project Amount:** \$804,700  
**SRF Loan Funds:** \$767,700      **Other Funds:** \$37,000, S.I.D. Funds for land acquisition & legal costs

### B. Community Description:

**Location:** The S.I.D. is located along Highway 35, approximately 2 miles east of the City of Norfolk in Stanton County.

**Population, Present and Projected, and Design Year:** The current population (2010 census) served by S.I.D.'s sewer is 1,451. The S.I.D. is fully developed and is unlikely to experience any significant further growth. .

**Current Methods of Waste Treatment:** The S.I.D.'s sewer system consists of approximately 30,000 feet of sewer pipe and 119 manholes. Since 1986 the S.I.D. has transported its sewage by a 12-inch gravity sewer to the City of Norfolk's lift station. Sewage from the S.I.D. is then pumped to Norfolk's wastewater treatment facility.

### C. Project Description:

**Purpose: (What does project hope to achieve):** The S.I.D. collection system is prone to excessive infiltration/inflow which contributes significantly to higher flows to Norfolk's lift station during wet weather conditions, and has resulted in sewer backups in residences served by the City of Norfolk. The City of Norfolk and the S.I.D. entered into a Memorandum of Understanding on May 20, 2014 that stipulated that the City will not accept peak flows from the S.I.D. in excess of 345 gallons per minute. Sewer backups in residences served by the City of Norfolk will be eliminated.

#### Type:

1. Certain portions of the S.I.D. collection system will be slip lined in order to reduce infiltration/inflow.
2. The excess flow (i.e. flow that exceeds 345 gallons per minute) will be diverted to a detention basin by overflowing a weir. A detention basin with a storage capacity of 196,000 gallons is proposed. The detention basin is designed to store 533 gallons per minute for 6 hours. A short length of 6-inch gravity sewer main will serve as a restriction to limit the flow and the excess flow will be diverted to the detention basin via a 12-inch gravity sewer main. The basin will store the excess flow for the duration of the wet weather event. The detention basin will be lined with a synthetic liner. Sewage stored in the detention basin will be allowed to be fed back into the existing 12-inch sewer main via an 8-inch gravity sewer when sewage flows generated by the S.I.D. are normalized. The footprint of the detention basin will have an area of approximately 22,000 square feet and will be located on one acre of land south of the S.I.D. The detention basin would be sloped to drain so that it is generally empty when not in use. The proposed basin will be located in the SW ¼ of Sec 18, T24N, R01E of the 6<sup>th</sup> PM. A metering manhole that will measure flow will be located in the existing 12-inch gravity sewer downstream of the point at which the 8-inch gravity sewer from the detention basin connects to the existing 12-inch sewer. The City of Norfolk measures cumulative flow once a month. The flow measurement device is also calibrated once a month.

**Design Factors:** A detention basin with a storage capacity of 196,000 gallons is proposed. The

detention basin is designed to store 533 gallons per minute for 6 hours.

**D. Alternatives Considered:** No other alternative then the one described above was considered.

**Reasons for Selection of Proposed Alternative:** The S.I.D. wanted to continue to transport sewage to the City of Norfolk's lift station. A Memorandum of Understanding (MOU) between the S.I.D. and the City of Norfolk was signed on May 20, 1014. The MOU between the City of Norfolk and the S.I.D. establishes the parameters under which the City of Norfolk will treat the sewage generated by the S.I.D. This arrangement eliminates the need for the S.I.D. to treat its own waste and thereby eliminates the need for the S.I.D. to meet NPDES permit requirements.

**E. Environmental Impact Summary:**

**1. Primary**

**a. Construction:** No significant impact is expected. Slight noise and air pollution associated with earthwork construction will occur during work hours. Minor soil erosion and vegetation losses will occur during construction. No burning, blasting, herbicides or defoliants will be permitted in clearing of the site.

**b. Environmental:** Any negative impact due to disturbing of the existing landform will be temporary. A construction storm water runoff permit and related erosion control provisions will not be required by NDEQ for this project since less than one acre of land will be disturbed.

**c. Financial:** S.I.D.'s current residential sewer user charge is a charge of \$17.19/month for the first 6,000 gallons of water use in the winter quarter plus \$0.60/1,000 gallons for water usage in excess of 6,000 gallons. The S.I.D. has 560 sewer connections. The S.I.D. will generate sufficient revenues by assessing adequate sewer use fees in order to pay the CWSRF debt service, pay the fees due to the City of Norfolk and also to pay for the operation and maintenance of their own sewer utility. The projected sewer use fees are estimated to be about \$30.00/month/user.

**2. Secondary**

**a. Population Impacts:** No impact is expected on the population density but the project would serve the existing population, which is also the 20-year design population.

**b. Land Use and Trends:** Minor impact is expected on the existing land use. The plot of land currently has a few trees, which will be have to be taken out in order to construct the detention basin. The proposed site was not designated as prime farmland by the Natural Resources Conservation Service.

**c. Environmental:** Filling in Waters of the US is not expected. All expected impacts to Waters of the US will be permitted under the Clean Water Act, Section 404 Nationwide Permit. The Natural Resource Conservation Service (NRCS) reviewed the area of the proposed lagoons and determined that the site did not involve prime farmland. The Nebraska State Historical Society stated that a determination of no historic properties affected is appropriate for this undertaking. The Nebraska Department of Natural Resources project review identified no comments. The Nebraska Game and Parks Commission (NGPC) indicated that the project may impact the northern long-eared bat (NLEB). To avoid impacting NLEB, NGPC recommends tree clearing activities outside of the pup season from June 1 through July 31. NGPC also indicated that construction activities that involve vegetation removal should be scheduled to avoid impacting migratory bird nesting.

**3. Mitigation measures necessary to eliminate adverse environmental effect:** A requirement to comply with the Migratory Bird Treaty Act will be included in the project specifications. To avoid impacting NLEB, the S.I.D. may restrict tree clearing activities inside of the pup season from June 1



through July 31 as recommended by NGPC.

**4. Irreversible and irretrievable commitment of resources:** Resource commitment will be minor in construction materials and energy use to build and operate the new lagoon.

**F. Measure Taken to Insure Environmental Soundness:**

- 1. Public Involvement:** A public hearing was held on February 29, 2016, having the required 30-day advertised notice.
- 2. Public Opposition or Opinions:** No public opposition was noted at the February 29, 2016, public hearing.
- 3. Coordination and Documentation with Other Agencies and Special Interest Groups**
  - a. Technical Memorandum:** Dated August 20, 2015 prepared by JEO Consulting Group.
  - b. Collection System Study:** Dated April, 2014 prepared by JEO Consulting Group.
  - b. Federal:**
    - 1. Department of the Army, Corps of Engineers,** August 6, 2015, letter
    - 2. U.S. Dept. of Agriculture, Natural Resources Conservation Service,** July 1, 2015, email
  - c. State:**
    - 1. Nebraska Department of Natural Resources,** July 24, 2015, email
    - 2. Nebraska State Historical Society,** July 6, 2015, letter
    - 3. Nebraska Department of Aeronautics,** July 9, 2015, email
    - 4. Nebraska State Fire Marshall ,** July 2, 2015, email
  - d. Consulting Engineers:** JEO Consulting Group, Norfolk, NE
  - e. Public Groups:**
    - 1. S.I.D. Residents**

**G. Positive Environmental Effects to be realized from the Proposed Project:** Sewer backups in residences served by the City of Norfolk will be eliminated.

**H. Reasons for concluding there will be no Significant Impacts:** No adverse impact occurs on wetlands, floodplain, or recorded historical resources. Provisions included in the construction contract will protect nesting migratory birds. To avoid the S.I.D. may restrict tree clearing activities inside of the pup season from June 1 through July 31 as recommended by NGPC and thereby avoid impacting NLEB. No potential recreation and open space opportunities exist. No change in land use will occur.

*McAdams PE* Reviewing NDEQ Engineer 3/23/16 Date